

group was also the first to obtain a magnetoencephalogram with a high- T_c SQUID.

During a vacation in 1993, Christoph met Friedhelm Schur of Lufthansa; together, they conceived the idea of a collaboration between manufacturers and users of nondestructive evaluation systems and experts in SQUIDS. This consortium was enormously successful, and resulted in the testing of a high- T_c SQUID system at the Frankfurt airport in Germany to evaluate the landing wheels of aircraft.

Well before the advent of high- T_c superconductivity, Christoph recognized the importance of cryocoolers in promoting the application of superconductivity. Early in the 1980s, he developed Stirling cryocoolers in which to operate his Nb_3Ge SQUIDS. This work was greatly accelerated by his collaboration with the late Jim Zimmerman, who spent sabbatical leaves in Giessen and Jülich, and whose obituary appeared in the July issue of PHYSICS TODAY (page 70). After returning from Jülich to Giessen in 1993, Christoph—together with Günther Thomas—developed a pulse-tube cooler and used it to operate a YBCO SQUID gradiometer in an unshielded environment. The cooler produced low levels of electromagnetic interference and could achieve temperatures down to 2.3 K. In 1998, Christoph founded Giessen's Trans-Mit Center for Adaptive Cryotechnology and Sensors to develop and manufacture pulse-tube refrigerators.

Christoph's interests encompassed both fundamental and applied research. Although he tried to find useful applications for his work, his primary concern was to comprehend the underlying physics. He was highly regarded as a teacher and as a research adviser. He mentored many outstanding doctoral students. He was chairman of the German Physical Society's low-temperature physics section. He was the originator and organizer of the annual German Cryoelectronic Workshop and the annual International Cryocooler Workshop. He cultivated close ties with the low-temperature physics communities in China and the former USSR. After the collapse of the Soviet Union, he worked to maintain Russian and Ukrainian low-temperature research activities through German sponsorship. Christoph was also instrumental in establishing the Institute for Physical High Technology in Jena, Germany.

Christoph was a passionate world

traveler, an ardent music lover, and an active participant in the cultural life of his community. He remained professionally active until shortly before his death.

He will be sorely missed not only by his family and many friends around the world, but also by the low-temperature physics community.

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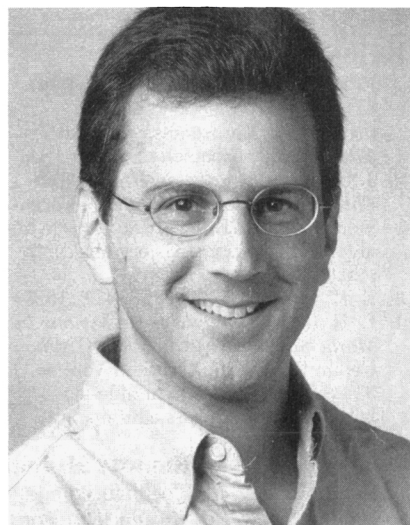
Jeffrey Alan Willick

Jeffrey Alan Willick, assistant professor of physics at Stanford University, was tragically killed on 18 June in his hometown of Teaneck, New Jersey. He was struck by a runaway car as he worked on his laptop computer in a coffee shop.

Born on 8 October 1959 in Teaneck, Jeff graduated with a BA in physics and chemistry from Harvard University in 1981, received his MA in physics from the University of California, Berkeley, in 1983, and obtained his PhD in physics in 1991 from Berkeley. He was a postdoctoral fellow at the Carnegie Observatories in Pasadena, California, for four years before joining the faculty at Stanford.

Jeff was an observational cosmologist who mapped peculiar velocities, the component of a galaxy's motion above and beyond that resulting from the uniform expansion of the universe. This important work requires the technically challenging direct measurement of galaxy distances. Jeff was a world expert in the development of observational techniques and mathematical formalisms to extract unbiased statistics about the large-scale peculiar velocity field.

Jeff had always been fascinated by the coherence of the cosmic velocity field. In collaboration with Stéphane Courteau and others, Jeff combined peculiar velocity data from a number of surveys—including his own—to produce a single, unified dataset with which to explore the large-scale velocity field. He also undertook two new, uniform, all-sky surveys: one by himself and the other in collaboration with Courteau, Michael Strauss, and others. The latter survey showed conclusively that the velocity field has a coherence length of less than 60 megaparsecs, a result that agrees



JEFFREY ALAN WILICK

with currently popular cosmological models. Jeff developed statistically rigorous techniques for quantitatively comparing the peculiar velocity data with large-scale redshift surveys, yielding perhaps the best limits to date of the cosmological density parameter from cosmic velocity fields.

Before his death, Jeff was the leader of a vibrant group of undergraduate students, graduate students, and postdoctoral fellows at Stanford who were engaged in exciting projects in cosmology. These projects ranged from the determination of the Hubble constant to a major new survey for high-redshift clusters of galaxies.

Jeff impressed everyone with his extensive knowledge of physics and astronomy, his keen intuition, his attention to mathematical and astronomical details, and his perfectionism. He had established a distinguished teaching record at Stanford and was highly valued as an academic mentor, but he also enjoyed discussing science beyond the borders of academia.

Jeff was a warm person who enjoyed family life: He was an outstanding husband of Ellen Schneider and father of Jason, Emily, and Julia. He was also a wonderful friend to us. His death is a tremendous personal loss and a loss to the world of astronomy.

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